



SPURS-UK



- Contribute to international programme by:
 - determining horizontal advection of S using a single point mooring
 - measuring the near-surface S using novel sensors
 - synthesis of *in situ*, glider (to be deployed on French STRASSE cruise) and satellite data with international collaborators (US, French, Spanish, Irish, etc...)
- Proposal submitted 1st Dec 2010
 - Srokosz, Gommenginger, Cunningham, Bryden, Banks, Pascal

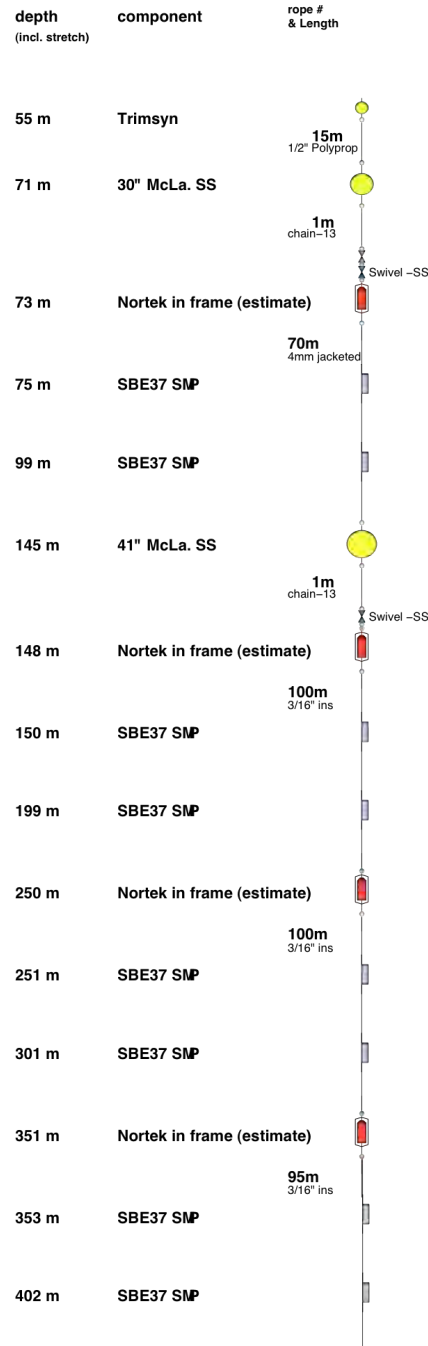


Mooring

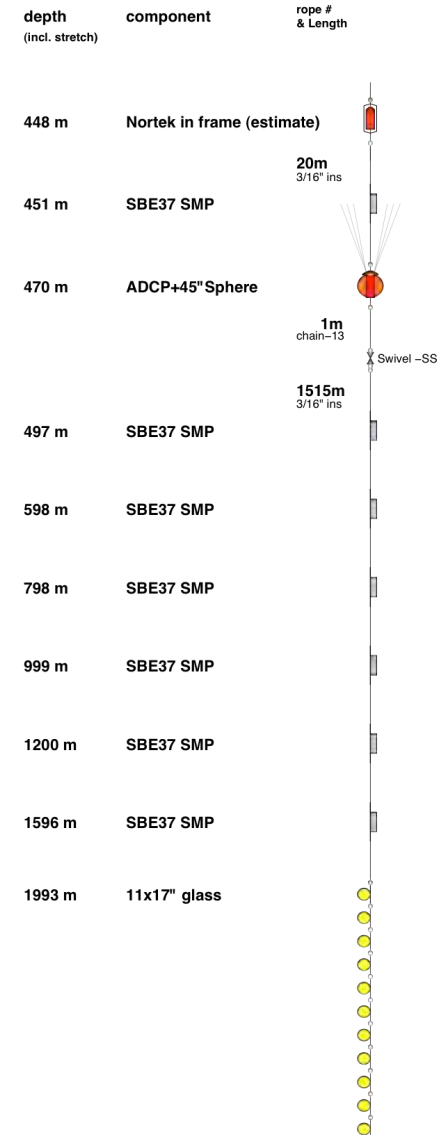
- aim: to determine horizontal advection of S using a single point mooring (Bryden 1976, 1980)
- also estimate w
- use combination of CTD, current meter and ADCP (75kHz) measurements
- 4 day temporal res.



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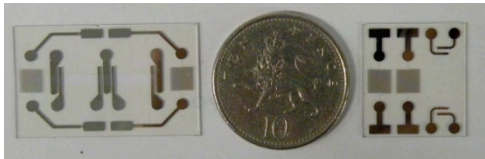


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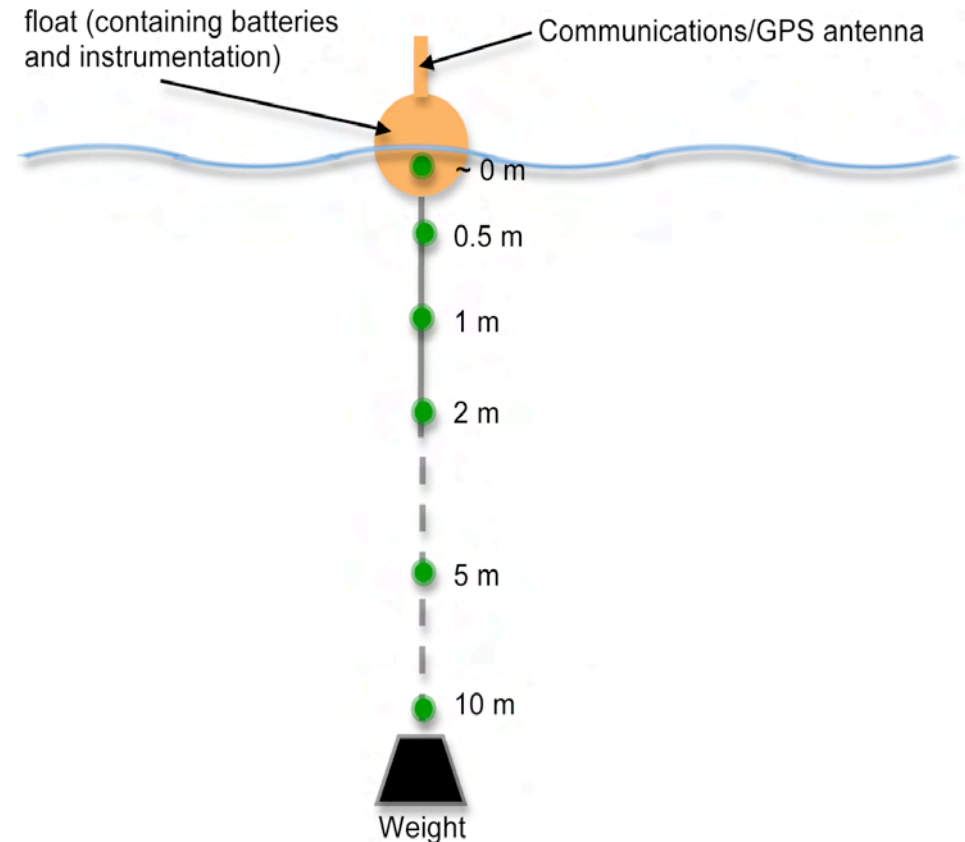


Surface drifters

- Novel “lab-on-a-chip” CT sensors

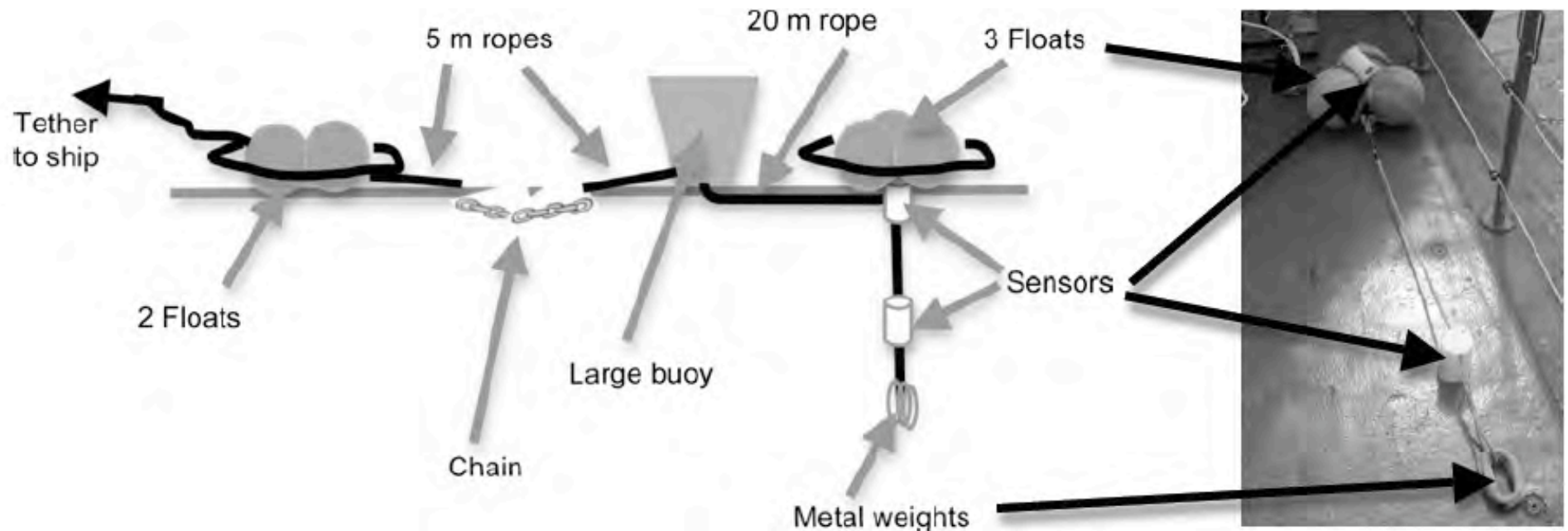


- 3 drifters
 - GPS + Iridium
- Test tethered
 - Autumn 2011
- Deploy drifting
 - Summer 2012



Earlier version of drifter

- Tested on 26°N cruise in tethered mode Jan / Feb 2010
- Some problems with “lab-on-a-chip” sensors
- New improved version now being lab tested



Satellites: SMOS (+Aquarius)

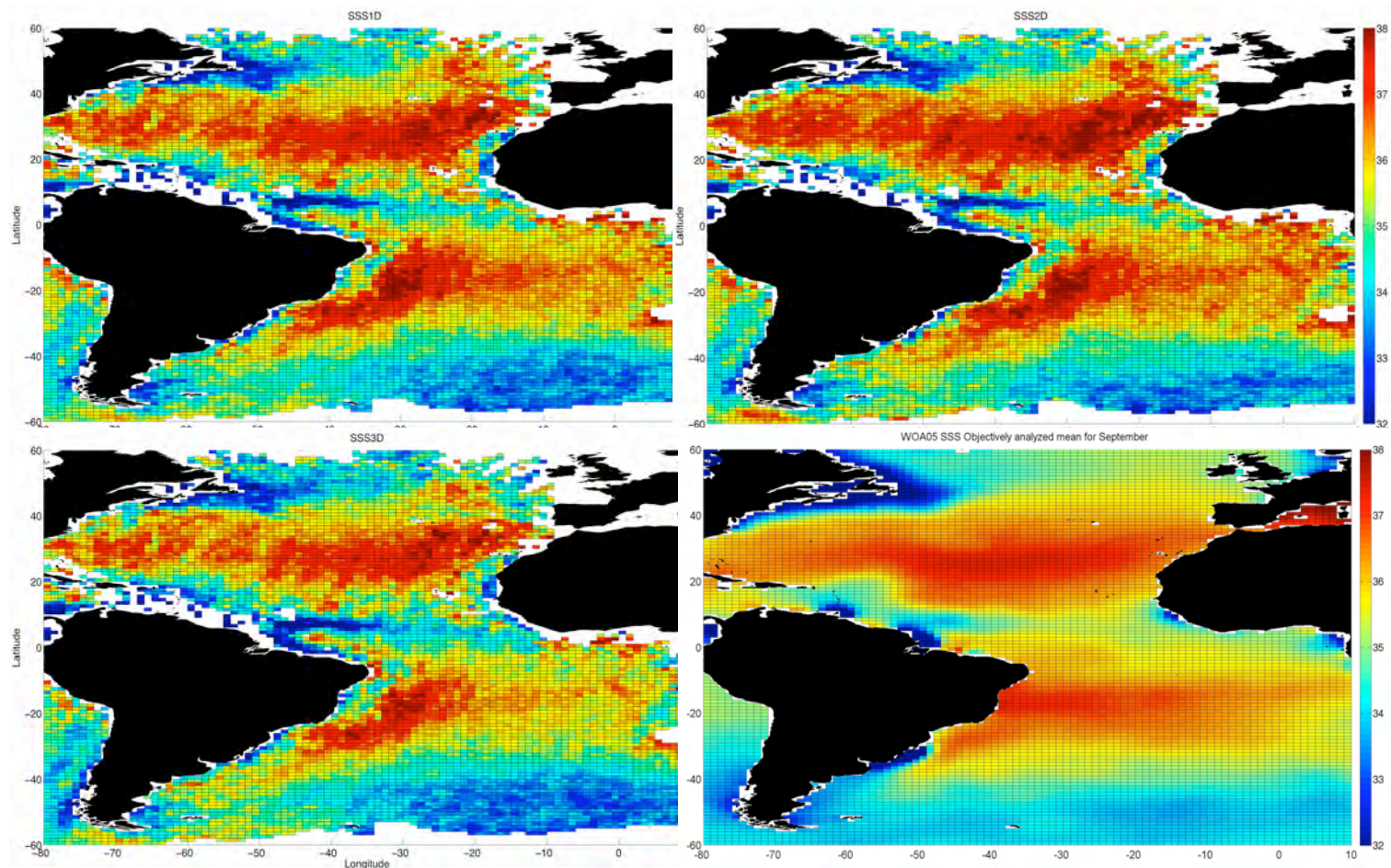
- To look at larger-scale SSS variations



SMOS data

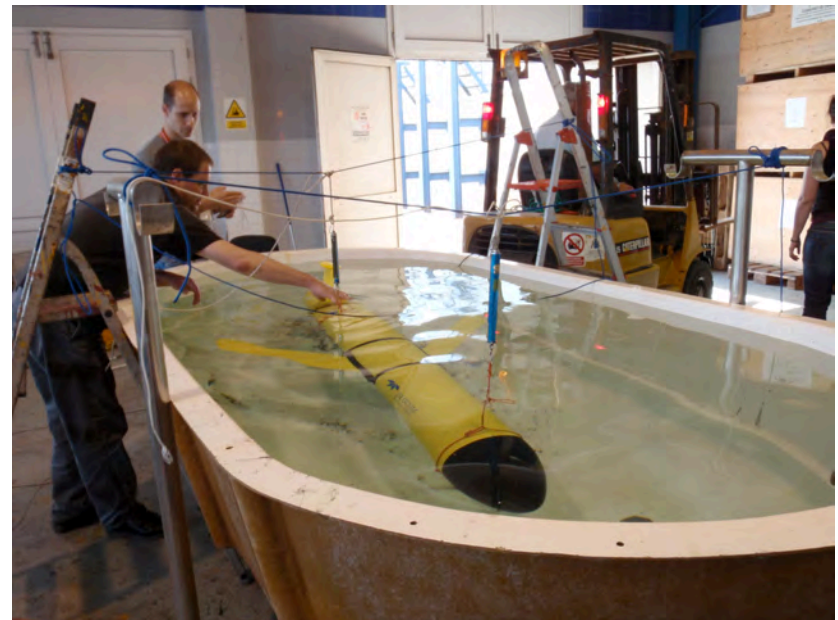
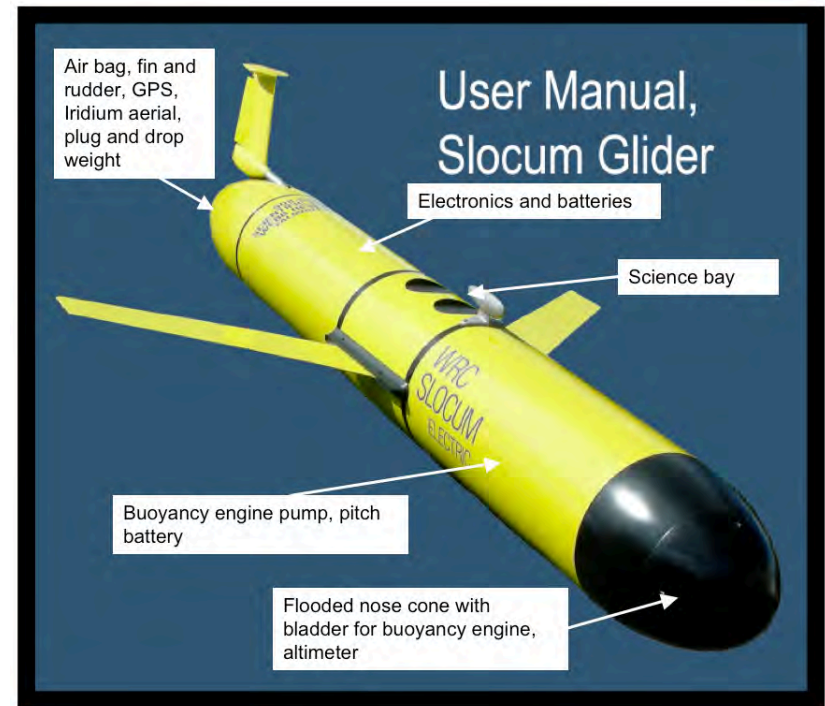
SSS from 3
models –
descending
passes only
– plus WOA
climatology

Sept. 2010
1° x 1°



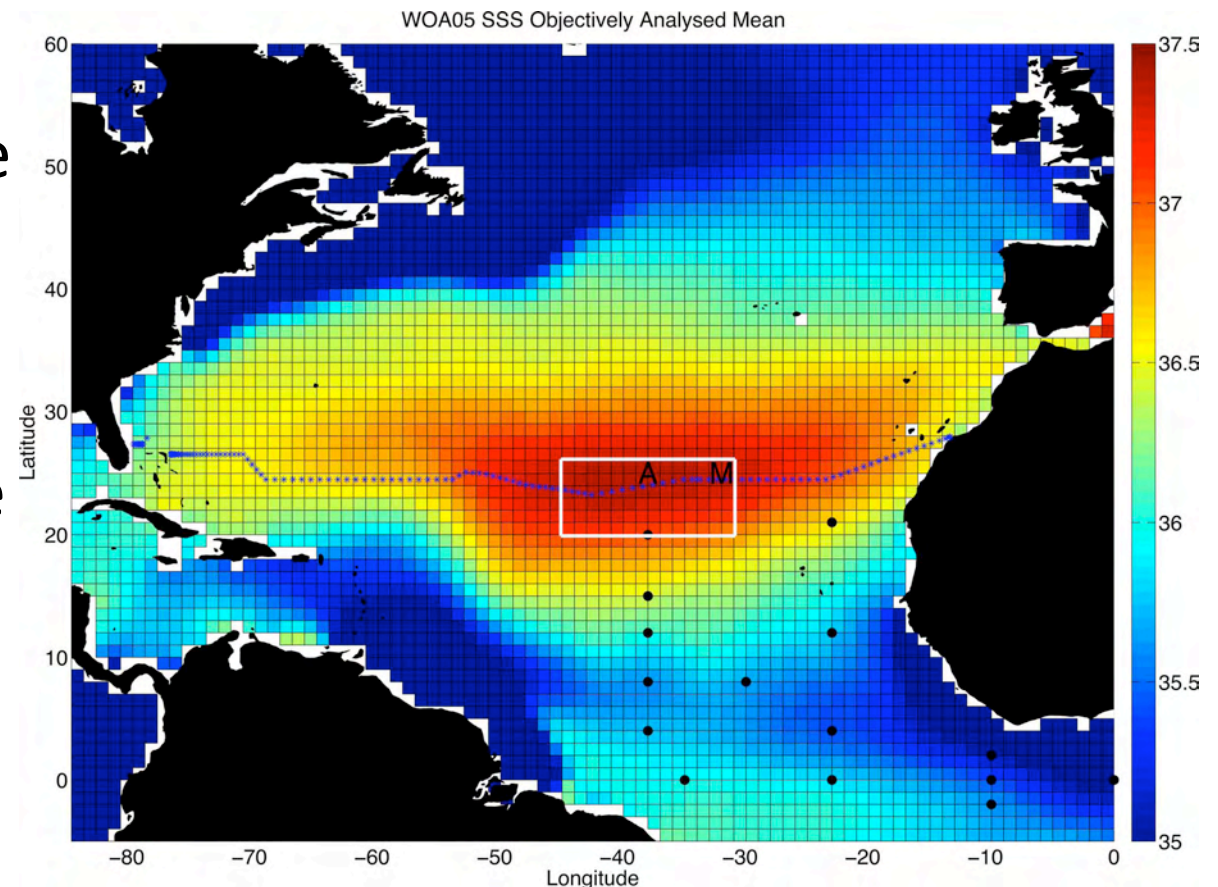
Glider

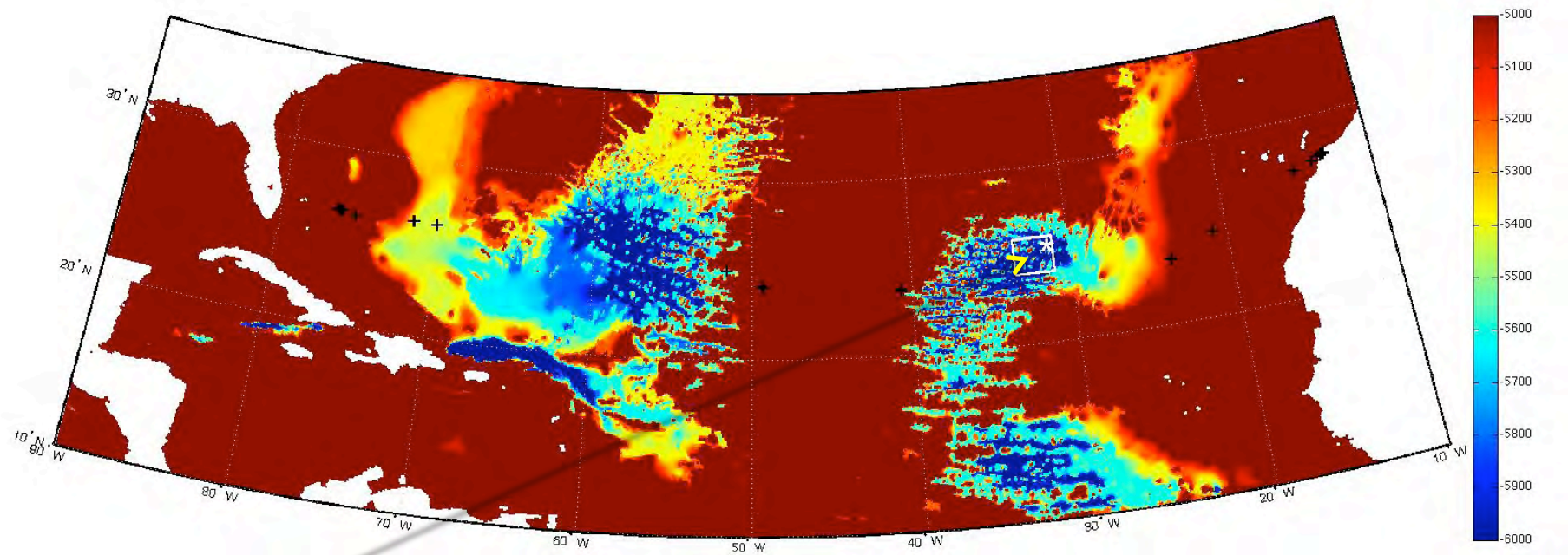
- To be deployed during STRASSE cruise summer 2012
- Repeat “box” survey around mooring to look at spatial variability and representativeness of mooring measurements



Cruise plans

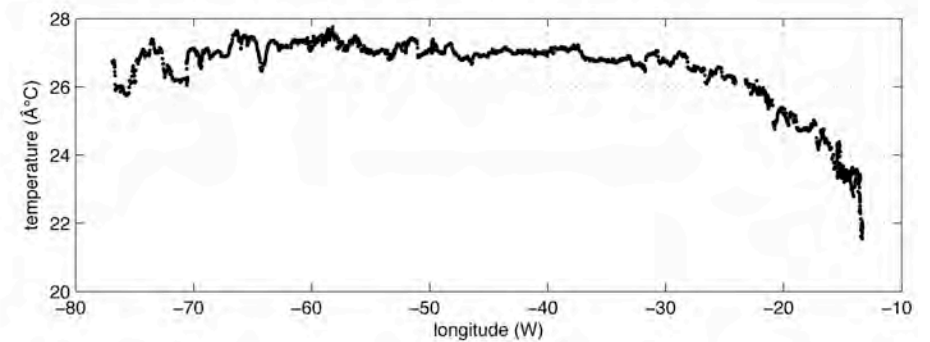
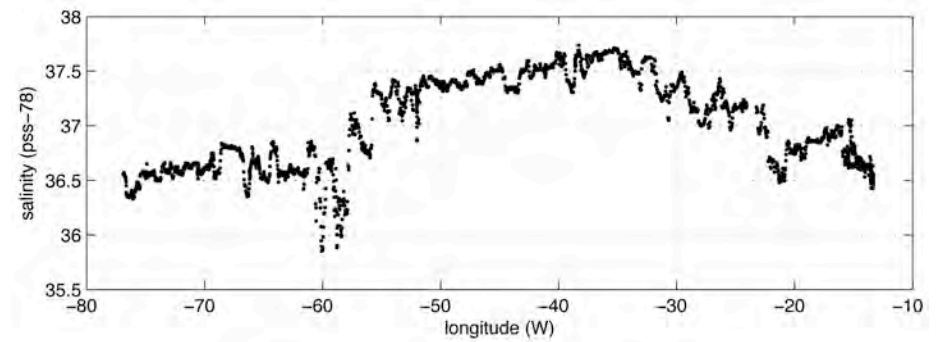
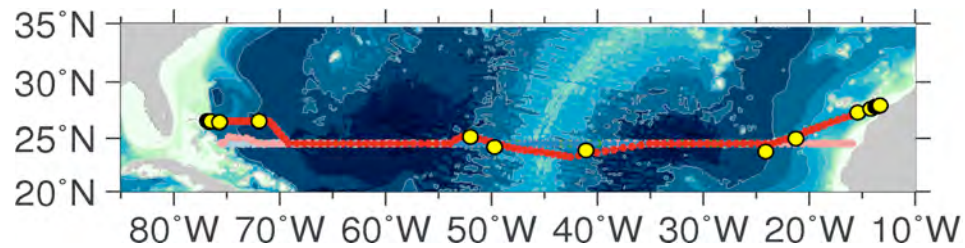
- Deploy / recover mooring on autumn 2011 & 2012 RAPID eastern boundary cruises 26°N
- Test drifters
 - Tethered mode
 - Autumn 2011
- Deploy drifters
 - STRASSE cruise
 - Summer 2012
 - also glider





Proposed mooring location

26°N section Jan/Feb 2010



Expected UK contribution to SPURS

- Salinity advection estimates – from 1-year mooring deployment
- Near surface salinity structure – from drifter deployments (perhaps a few months of data)
- Assessment of spatial variability of salinity structure – cruise deployment of glider; SMOS (+Aquarius) observations of SSS
- Contribution to analysis and synthesis of SPURS observations

